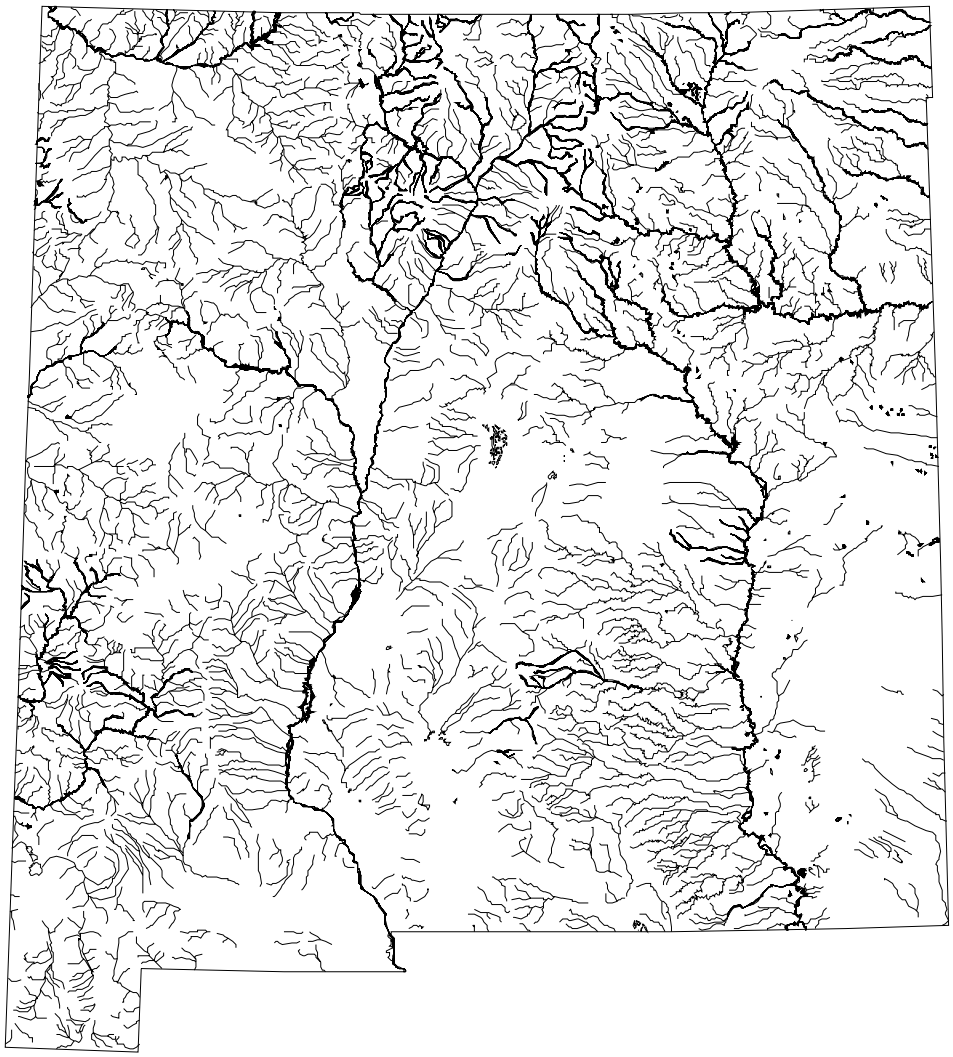
STATE OF NEW MEXICO

WATER QUALITY CONTROL COMMISSION

2004-2006 STATE OF NEW MEXICO INTEGRATED CLEAN WATER ACT §303(d)/§305(b) REPORT



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NMED/SWQ-2004/01

2004 – 2006
STATE OF NEW MEXICO
INTEGRATED CLEAN WATER ACT §303(d)/§305(b) REPORT

WATER QUALITY AND WATER POLLUTION CONTROL IN NEW MEXICO

New Mexico Water Quality Control Commission

P.O. Box 26110
Santa Fe, New Mexico 87502

Additional copies of this document are available upon request by e-mail at "*gary_king@nmenv.state.nm.us*", by telephone at (505) 827-2928, or by fax at (505) 827-0160. Requests can also be mailed directly c/o Gary King, Surface Water Quality Bureau, Water & Waste Management Division, New Mexico Environment Department, Harold Runnels Building N2105, 1190 St. Francis Drive, P.O. Box 26110, Santa Fe, New Mexico USA 87502. This document was originally created in Microsoft® Word™ 2000 (9.0.6926). Individual chapters can be downloaded from the Internet as Adobe Acrobat v.5.0.5 files at http://www.nmenv.state.nm.us/wqcc/303d-305b/2004/index.html. Other electronic versions including CD-ROM available upon request.

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~ A C K N O W L E D G E M E N T S ~

The New Mexico Environment Department prepares this report, as part of its delegated responsibilities, for review and approval by the New Mexico Water Quality Control Commission. Preparation of this edition involved many people both inside and outside of the Department.

The editor would like to extend his gratitude for valuable assistance in reviewing and writing the report to Ramona Rael, Richard Rose, and Valerie Trujillo of the Construction Programs Bureau, Julie Desai and Rusty Rodke of the Drinking Water Bureau, Jerzy Kulis in the Ground Water Quality Bureau, John Keiling of the Hazardous Waste Bureau, Anna Richards and Dominic McBride at the Petroleum Storage Tank Bureau, Butch Tongate in the Solid Waste Bureau, as well as Steve Baumgarn, Mike Coffman, Daniel Guevara, Dave Hogge, Marcy Leavitt, Maryann McGraw, Allan Pasteris, Glenn Saums, and Delbert Trujillo in the Surface Water Quality Bureau. Several others beyond those mentioned have also contributed to the report as word processors, linguists and final-content reviewers; their patient assistance is kindly remembered and gratefully appreciated.

Several WQCC Commissioners or their designees were instrumental in building this document. Special thanks are extended to Cheryl Bada from the State Parks Division of Energy, Minerals and Natural Resources Department (EMNRD), Lynn Brandvold at the Bureau of Geology and Mineral Resources, Steve Glass, representing New Mexico's municipalities, Doug Murray representing both the Office of the State Engineer and the Interstate Stream Commission, Bill Olson in EMNRD's Oil Conservation Division, Howard Hutchinson from the Soil and Water Conservation Commission, and Maxine Goad, Member-At-Large.

My special thanks is extended to Lynette Guevara of the Surface Water Quality Bureau for her exemplary work in rewriting, originating and proofing several key sections of the Report. Mrs. Guevara is the database administrator and primary editor for Appendix B, which represents, with its Category 5 watersheds, the CWA §303(d) List of Impaired Surface Waters in New Mexico. In keeping with EPA's new 303(d)/305(b) integrated reporting mandate, Lynette has attended countless meetings, seminars and workshops while developing and refining protocols and strategies that are essential for validating the scientific approach to reporting the condition of New Mexico's surface waters.

In closing, the editor would like to extend his humble gratitude to all the fine State employees at the State Printing Offices in Santa Fe who helped make this effort a reality.

Enjoy,

Gary King
Editor

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LIST OF ACRONYMS

ADB	*Access*® Database
AIP	Agreement-In-Principle
AST	Above-ground storage tank
BLM	United States Bureau of Land Management
BMMR	New Mexico Bureau of Mines and Mineral Resources
BMP	Best management practice
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CWL	Chemical Waste Landfill
COA	City of Albuquerque
COC	Constituents of Concern
CPB	Construction Programs Bureau, New Mexico Environment Department
CWA	Clean Water Act
DA	New Mexico Department of Agriculture
DGF	New Mexico Department of Game and Fish
DLG	Digital Line Graph database, an information system of the United States Geological Survey
DOD	United States Department of Defense
DOE	United States Department of Energy
DOI	United States Department of Interior
DRASTIC	*D*epth to water; (net aquifer) *R*echarge; *A*quifer media; *S*oil media; *T*opography; *I*mpact on the vadose zone media; and *C*onductivity database of the United States Environmental Protection Agency
DWB	Drinking Water Bureau, New Mexico Environment Department
EID	Environmental Improvement Division, precursor to the New Mexico Environment Department
EMNRD	New Mexico Energy, Minerals and Natural Resources Department
EPA	United States Environmental Protection Agency
ER	Environmental restoration
ET	Evapotranspiration
FU	Field unit
GIS	Geographic Information System
GWQB	Ground Water Quality Bureau, New Mexico Environment Department
IRP	Installation Restoration Project
ITRI	Inhalation Toxicology Research Institute
ISC	New Mexico Interstate Stream Commission
KAFB	Kirtland Air Force Base
LAAO	Los Alamos Area Office, United States Department of Energy
LANL	Los Alamos National Laboratories
LRRI	Lovelace Respiratory Research Institute
LUST	Leaking underground storage tank
LWDR	Liquid Waste Disposal Regulations
LWDS	Liquid Waste Disposal System
MEK	Methyl ethyl ketone
MMRD	Mining and Minerals Division
MOA	Memoranda of agreement
MODFLOW	Modular three-dimensional finite-difference ground water model software developed by the USGS
MWPP	Municipal Water Pollution Prevention Program
NEPA	National Environmental Policy Act
NESHAP	National Emission Standards for Hazardous Air Pollutants
NFA	No Further Action
NMED	New Mexico Environment Department
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NPS	Nonpoint source
NRCS	Natural Resource Conservation Service, United States Department of Agriculture
NRCC	Natural Resource Conservation Commission
OCC	New Mexico Oil Conservation Commission
OCD	Oil Conservation Division, New Mexico Energy, Minerals and Natural Resources Department

List of Acronyms, continued.

OSE	Office of the State Engineer
PAH	Polycyclic aromatic hydrocarbon
PCB	Polychlorinated biphenyl
PNM	Public Service Company of New Mexico
PPP	Pollution Prevention Plans
PRS	Potential Release Site
PSR	Point Source Regulation Section, Surface Water Quality Bureau of the New Mexico Environment Department
QA/QC	Quality assurance/quality control
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation work plan
RHWMB	Radioactive and Hazardous Waste Material Bureau, New Mexico Environment Department
RN	Radionuclide
SARA	Superfund Amendments and Reauthorization Act
SDWA	Safe Drinking Water Act
SER	Sandia Engineering Reactor
SHTD	New Mexico State Highway and Transportation Department
SIC	Standard Industrial Classification
SNL	Sandia National Laboratories
SPD	State Parks Division; New Mexico Energy, Minerals and Natural Resources Department
STORET	STOrage and RETrieval database of the United States Environmental Protection Agency
SVOC	Semi-volatile organic compound
SWA	Solid Waste Act
SWCC	Soil and Water Conservation Commission
SWCS	Soil and Water Conservation Service
SWHCP	Site-Wide Hydrogeologic Characterization Project
SWQB	Surface Water Quality Bureau, New Mexico Environment Department
SWMU	Solid Waste Management Unit
TA-	Technical Area (-integer), Los Alamos National Laboratories
TDS	Total dissolved solids
TMDL	Total maximum daily load
TSDF	Treatment, storage or disposal facilities for hazardous waste
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	Underground storage tank
USTB	Underground Storage Tank Bureau, New Mexico Environment Department
VCM	Voluntary Corrective Measures
VOC	Volatile organic compound
WIPP	Waste Isolation Pilot Project
WHPP	Wellhead Protection Program, a function of NMED's Drinking Water Bureau
WQCC	New Mexico Water Quality Control Commission

LIST OF APPENDICES

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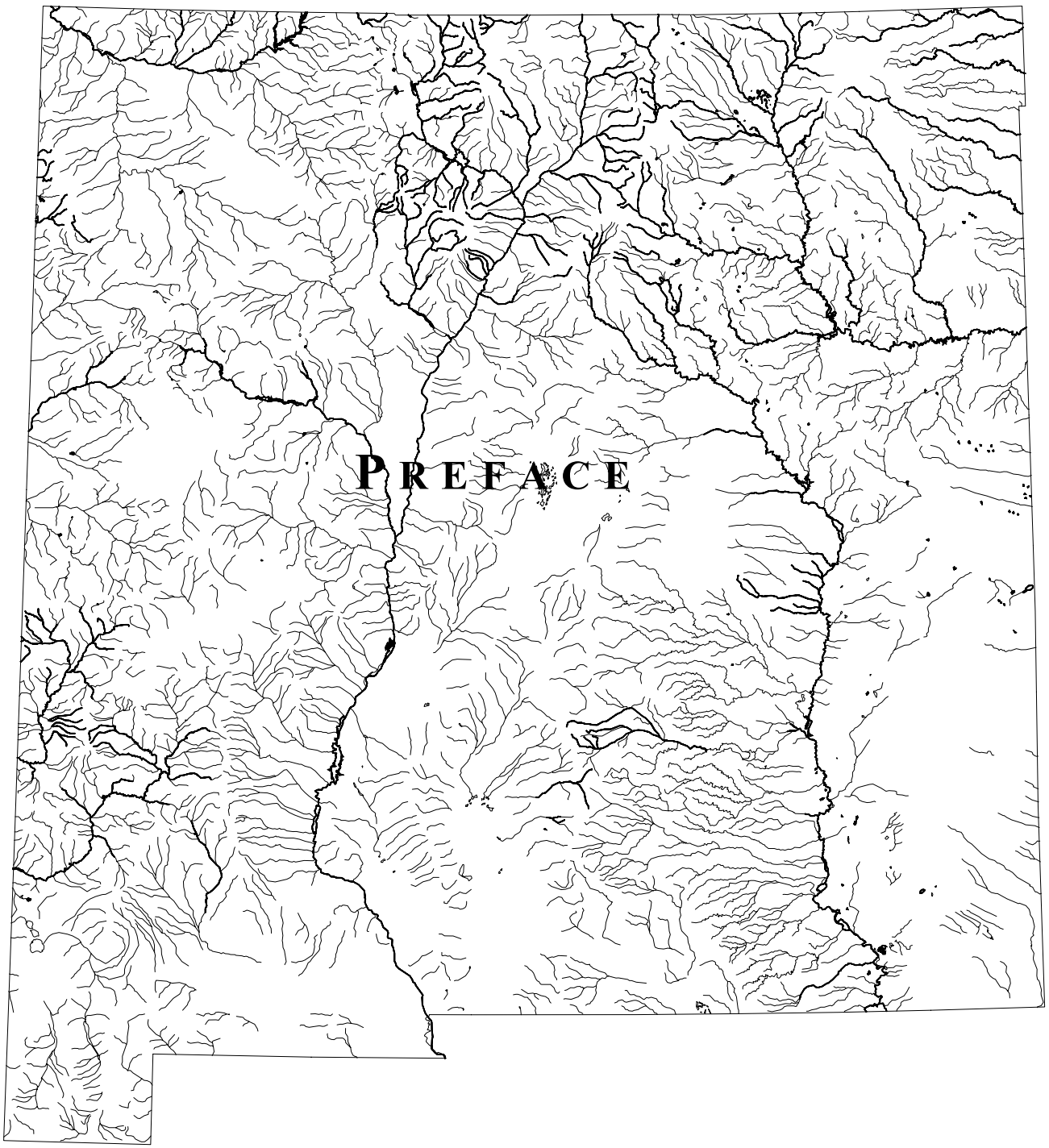

PREFACE

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PREFACE

This report is designed to satisfy the statutory requirements of Section (§) 303(d) and the reporting requirements of §§ 305(b) and 314 of the federal Water Pollution Control Act [33 U.S.C. 1288], commonly known as the Clean Water Act (CWA). It also designed to serve as a source of basic information on water quality and water pollution control programs in New Mexico. Accordingly, the intended audience includes the general public, interest groups, consultants, state legislators, governmental agencies at state, local, and federal levels, as well as universities and other educational entities.

State and federal agencies, statutes, regulations, and programs are distinctly identified within the various aspects of water pollution control management as required by the context.

Legal Requirements

CWA § 303(d)(2) requires that each state submit to the United States Environmental Protection Agency (EPA) a listing of water quality limited segments requiring wasteload allocations, load allocations and total maximum daily loads. CWA § 305(b) (1) requires that each state submit a biennial report to the United States Congress through the United States Environmental Protection Agency (EPA). The report is to include the following:

- an assessment of water quality;
- an analysis of the extent to which surface waters provide for protection and propagation of fish, shellfish, and wildlife and recreation in and on the water;
- an overview of progress in water pollution control and recommendations for further action;
- an estimate of the environmental, social, and economic impacts of restoring and maintaining the chemical, physical, and biological integrity of waters within the state; and
- a description of the nature of nonpoint source pollution and of programs for nonpoint source pollution control.

This integrated report contains four parts. Part I contains the *Executive Summary* and *Recommendations*. The executive summary focuses on water quality and water pollution control management results, highlighting major points made in the report. The recommendations from the New Mexico Water Quality Control Commission are addressed to both the United States Congress and the EPA.

Part II, *Surface and Ground Water Quality*, provides a basin-by-basin narrative on current pollution problem areas and efforts to remediate them. This part of the report also outlines the state's concerns of both its ground and surface water resources.

The third part of this integrated report, *Water Quality Management*, details the work of many agencies within the state entrusted with protecting New Mexico's water resources.

The final part, *Appendices*, contains the tabular information for the state's waterbodies that includes the Category 5 reaches that constitute the *2004-2006 State of New Mexico CWA §303(d) List for Assessed River/Stream Reaches Requiring Total Maximum Daily Loads (TMDLs)*.

Information Used

This report generally deals with the period from January 2002 through February 2004.

Relevant Federal Regulations

The guiding sections of the Federal Clean Water Act follow:

FEDERAL CLEAN WATER ACT ~ SECTION 303:

[*Codified into Public Law at U.S Code, Title 33, Chapter 26, Subchapter III, Section 1313*]

WATER QUALITY STANDARDS AND IMPLEMENTATION PLANS

(d) Identification of areas with insufficient controls; maximum daily load; certain effluent limitations revision

(1) (A) Each State shall identify those waters within its boundaries for which the effluent limitations required by section 1311(b)(1)(A) and section 1311(b)(1)(B) of this title are not stringent enough to implement any water quality standard applicable to such waters. The State shall establish a priority ranking for such waters, taking into account the severity of the pollution and the uses to be made of such waters.

(B) Each State shall identify those waters or parts thereof within its boundaries for which controls on thermal discharges under section 1311 of this title are not stringent enough to assure protection and propagation of a balanced indigenous population of shellfish, fish, and wildlife.

(C) Each State shall establish for the waters identified in paragraph (1)(A) of this subsection, and in accordance with the priority ranking, the total maximum daily load, for those pollutants which the Administrator identifies under section 1314(a)(2) of this title as suitable for such calculation. Such load shall be established at a level necessary to implement the applicable water quality standards with seasonal variations and a margin of safety which takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality.

(D) Each State shall estimate for the waters identified in paragraph (1)(B) of this subsection the total maximum daily thermal load required to assure protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife. Such estimates shall take into account the normal water temperatures, flow rates, seasonal variations, existing sources of heat input, and the dissipative capacity of the identified waters or parts thereof. Such estimates shall include a calculation of the maximum heat input that can be made into each such part and shall include a margin of safety which takes into account any lack of knowledge concerning the development of thermal water quality criteria for such protection and propagation in the identified waters or parts thereof.

(2) Each State shall submit to the Administrator from time to time, with the first such submission not later than one hundred and eighty days after the date of publication of the first identification of pollutants under section 1314(a)(2)(D) of this title, for his approval the waters identified and the loads established under paragraphs (1)(A), (1)(B), (1)(C), and (1)(D) of this subsection. The Administrator shall either approve or disapprove such identification and load not later than thirty days after the date of submission. If the Administrator approves such identification and load, such State shall incorporate them into its current plan under subsection (e) of this section. If the Administrator disapproves such identification and load, he shall not later than thirty days after the date of such disapproval identify such waters in such State and establish such loads for such waters as he determines necessary to implement the water quality standards applicable to such waters and upon such identification and establishment the State shall incorporate them into its current plan under subsection (e) of this section.

(3) For the specific purpose of developing information, each State shall identify all waters within its boundaries which it has not identified under paragraph (1)(A) and (1)(B) of this subsection and estimate for such waters the total maximum daily load with seasonal variations and margins of safety, for those pollutants which the Administrator identifies under section 1314(a)(2) of this title as suitable for such calculation and for thermal discharges, at a level that would assure protection and propagation of a balanced indigenous population of fish, shellfish, and wildlife.

(4) Limitations on revision of certain effluent limitations. -

(A) Standard not attained. -

For waters identified under paragraph (1)(A) where the applicable water quality standard has not yet been attained, any effluent limitation based on a total maximum daily load or other waste load allocation established under this section may be revised only if

(i) the cumulative effect of all such revised effluent limitations based on such total maximum daily load or waste load allocation will assure the attainment of such water quality standard, or

(ii) the designated use which is not being attained is removed in accordance with regulations established under this section.

(B) Standard attained. -

For waters identified under paragraph (1)(A) where the quality of such waters equals or exceeds levels necessary to protect the designated use for such waters or otherwise required by applicable water quality standards, any effluent limitation based on a total maximum daily load or other waste load allocation established under this section, or any water quality standard established under this section, or any other permitting standard may be revised only if such revision is subject to and consistent with the antidegradation policy established under this section.

[*§303(d)(4) added by Public Law 100-4*]

FEDERAL CLEAN WATER ACT ~ SECTION 305:

[*Codified into Public Law at U.S Code, Title 33, Chapter 26, Subchapter III, Section 1315*]

WATER QUALITY INVENTORY

[*State reports on water quality; transmittal to Congress*]

Sec. 305. (a) [*Omitted*] The Administrator, in cooperation with the States and with the assistance of appropriate Federal agencies shall prepare a report to be submitted to the Congress on or before January 1, 1974, which shall—

(1) describe the specific quality, during 1973, with appropriate supplemental descriptions as shall be required to take into account seasonal, tidal, and other variations, of all navigable waters and the waters of the contiguous zone;

(2) include an inventory of all point sources of discharge (based on qualitative and quantitative analysis of discharges) of pollutants, into all navigable waters and the waters of the contiguous zone; and

(3) identify specifically those navigable waters, the quality of which—

(A) is adequate to provide for the protection and propagation of a balanced population of shellfish, fish, and wildlife and allow recreational activities in and on the water;

(B) can reasonably be expected to attain such level by 1977 or 1983; and

(C) can reasonably be expected to attain such level by any later date.

(b) (1) Each State shall prepare and submit to the Administrator by April 1, 1975, and shall bring up to date by April 1, 1976, and biennially thereafter, a report which shall include—

(A) a description of the water quality of all navigable waters in such State during the preceding year, with appropriate supplemental descriptions as shall be required to take into account seasonal, tidal, and other variations, correlated with the quality of water required by the objective of this Act [*chapter*] (as identified by the Administrator pursuant to criteria published under section 304(a) of this Act [*1314(a) of this Title*]) and the water quality described in subparagraph (B) of this paragraph;

(B) an analysis of the extent to which all navigable waters of such State provide for the protection and propagation of a balanced population of shellfish, fish, and wildlife, and allow recreational activities in and on the water;

(C) an analysis of the extent to which the elimination of the discharge of pollutants and a level of water quality which provides for the protection and propagation of a balanced population of shellfish, fish, and wildlife and allows recreational activities in and on the water, have been or will be achieved bye the requirements of this Act, together with recommendations as to additional action necessary to achieve such objectives and for what waters such additional action is necessary;

(D) an estimate of (i) the environmental impact, (ii) the economic and social costs necessary to achieve the objective of this Act in such State, (iii) the economic and social benefits of such achievement, and (iv) an estimate of the date of such achievement; and

(E) a description of the nature and extent of nonpoint sources of pollutants, and recommendations as to the programs which must be undertaken to control each category of such sources, including an estimate of the costs of implementing such programs.

(2) The Administrator shall transmit such State reports, together with an analysis thereof, to Congress on or before October 1, 1975, and October 1, 1976, and biennially thereafter.

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